蝶と蛾 *Lepidoptera Science* **63** (2): 61–64, June 2012

On a little known species of genus *Erebia* (Lepidoptera Nymphalidae) in China

Takatoshi NAKATANI

Institute of Mountain Science, Shinshu University, 3–1–1 Asahi, Matsumoto, Nagano, 390–8621 Japan

Abstract *Erebia sinyaevi* Tuzov, 2006 is synonymized with *Erebia tristior* Goltz, 1937, and lectotype is designated to preserve the stability of zoological nomenclature, and avoid further confusion over identification.

Key words *Erebia, tristior, sinyaevi,* synonym, lectotype.

Introduction

The genus *Erebia* is distributed in the arctic, high altitude habitats, and the northern latitude tundra in the Eurasian and North American continents. In his monograph, Warren (1936) divided the species-group taxa into 15 groups based morphological characters such as male genitalia.

The author was reviewed the original descriptions after the publication of Warren's monograph, and has interested in the curious distributional ranges of *E. wanga*. The species *wanga* distributes in eastern Asia, from Amur region as the northern limits to north-eastern China as the southern limits. But, Goltz (1937) described *tristior* as a local form of *wanga* based on three males from central China, far distant from the main distributional range, Amur region and its neighbors. No figure was shown in his description, but according to his original description, *tristior* had distinct characteristics these were unlike *wanga*. The author examined their type series, and recognized them as a good species, and also was the same species with *E. sinyaevi* Tuzov, 2006.

The abbreviations used for the type depositories are as follows:

SDM: State Darwin's Museum, Moscow.

ZFAK: Zoologisches Forschungsmuseum Alexander König, Bonn.

Materials and Methods

The present study is based upon approximately 20 specimens of *E. wanga* from whole areas covering their distributional range. Type series of *tristior* were also examined based on the photographs including male genitalia. Type of *sinyaevi* was examined on its colour photograph and the sketch of male genitalia in the original description.

Taxonomic review

Erebia tristior Goltz, 1937 **stat. rev.** (Figs 1, 2)

Erebia tristis tristior Goltz, 1937: 190. Lectotype here designated. [ZFAK, examined].
Type locality: "Tapaishan am Tsingling (Sudschensi), 3,000m", [Taibaishan, Qinling mountain range, Shaanxi], China.

Erebia wanga: Tuzov, 1993: 32.

Erebia nero: Li and Zhu, 1992: 85, figs. 12r, 12v.

Erebia sinyaevi Tuzov, 2006: 33, fig. 1 (male genitalia), Pl.16, figs.5r, 6v. **syn nov.**
[SDM, Holotype not examined] (Fig. 2)
Type locality: Gansu prov., near Wudu, China.

This species is characterized by the following characters as described by Goltz (1937) and Tuzov (2006).

Male: Forewing length 27–29 mm. The eye spot on the forewing upperside is with two white pupils and the ring around the eye spot is not contrasting with the ground colour. The ground colour of hindwing underside is monotonous dark brown, lacking a white spot at the end of the discoidal cell.

Male genitalia (Fig. 1J): The valva is long and narrow, and not twisted at the tip as *E. wanga* (Fig. 3C). The brachia are long and straight.

Female: Unknown.

Type material examined: Three males in the Höne collection, collected from "Tapaishan am Tsingling (Sudschensi), 3000m", 18–25 June 1935. The ZFAK now possesses these type series. Lectotype (Fig. 1A–1C) and paralectotypes (Fig. 1D–1I) here designated.

Tuzov (2006) described *sinyaevi* based on three males from "Gansu prov. near Wudu, 1000 m" and "Shaanxi prov., Taibai Shan Mts., 1500 m, Houzhenzi vil." (Fig. 2).

Li and Zhu (1992) illustrated a male as *Erebia nero* Stdgr. The specimen illustrated was *tristior* and this was the first figure of the species. Wang (2005) reported *E. nero* from the Baishuijiang National Nature Reserve, south-west of

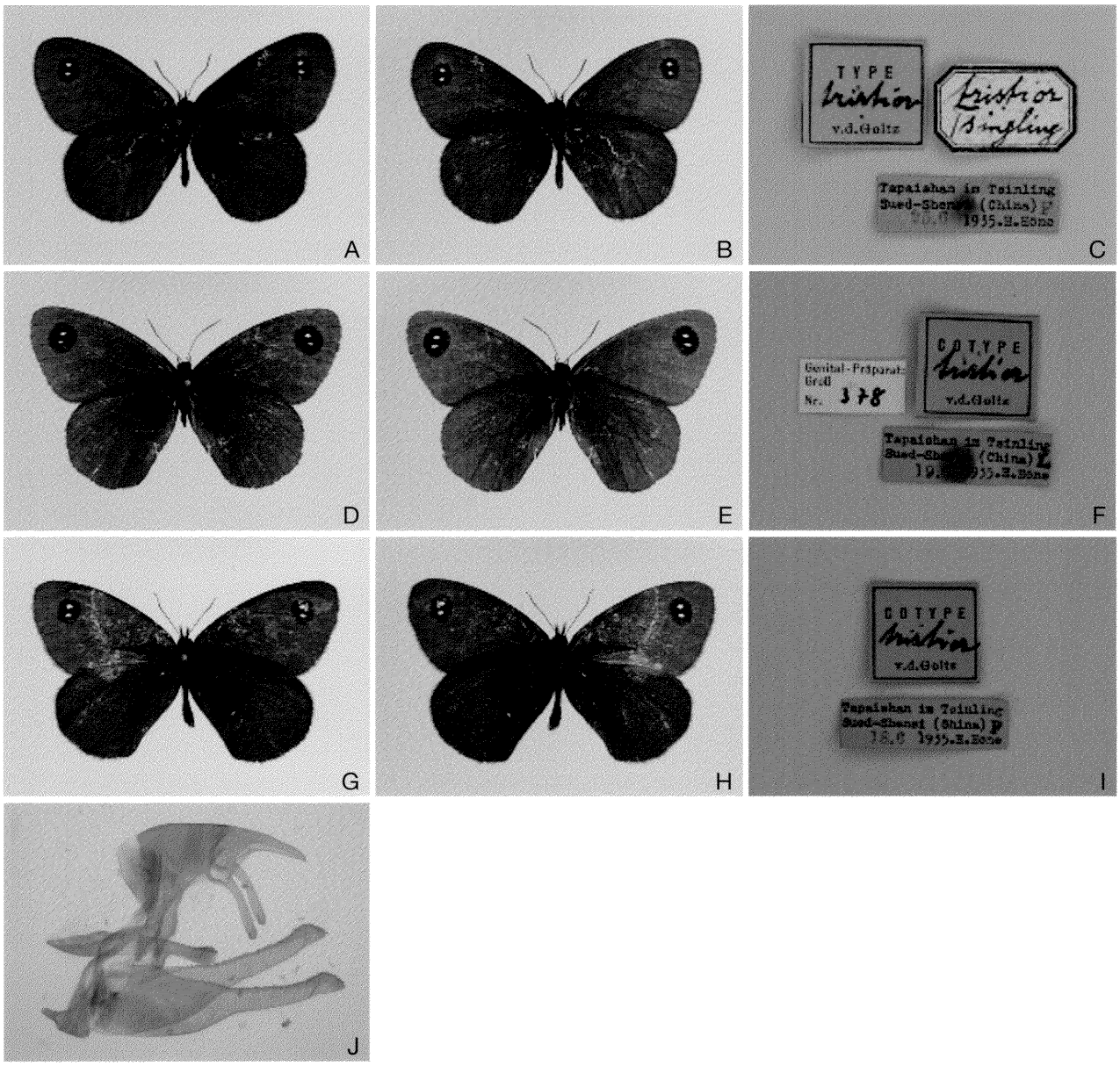


Fig. 1. Type series of *Erebia tristior*.
A: Male (lectotype here designated), upperside. B: *Ditto*, underside. C: *Ditto*, labels attached to the specimen. D: Male (paralectotype here designated), upperside, genitalia dissected (genitalia slide No. 378). E: *Ditto*, underside. F: *Ditto*, labels attached to the specimen. G: Male (paralectotype here designated), upperside. H: *Ditto*, underside. I: *Ditto*, labels attached to the specimen. J: Male genitalia (slide No. 378).

Gansu. He identified the butterflies based on the book of Li and Zhu (1992), so this record should be concerned with *E. tristior*.

Distirbution. This species is provably endemic to Qinling mountain range, at 1,000–3,000m alt., central China.

The adult and their habitat are shown in Fig. 5, and Fig. 6.

Erebia wanga Bremer, 1864 (Fig. 3)

Erebia tristis Bremer, 1861: 467. (nom. praeoccup. by *Erebia tristis* Herrich–Schäffer, [1848])
Type locality: "Bureja–Gebirge", [Lesser Khingan]: (Gorbunov, 2001: 248)

Erebia wanga Bremer, 1864: 20. Pl. 2, fig.1.

Erebia tristior: Kurentzov, 1970: 52, figs 55(2), 56(1) (wing venation), 57(2) (male genitalia); Kogure and Iwamoto, 1992:

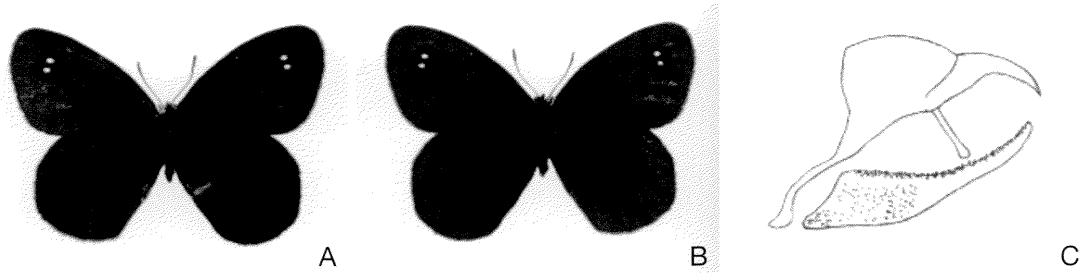


Fig. 2 *Erebia sinyaevi* (after Tuzov, 2006). A: Male (holotype), upperside. B: *Ditto*, underside. C: Male genitalia.

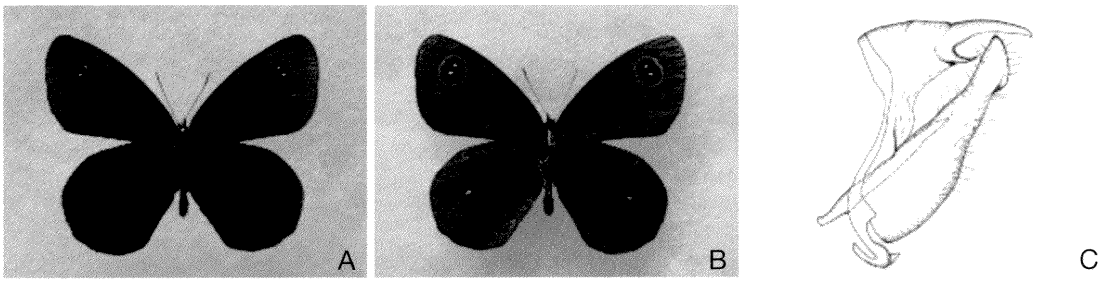


Fig. 3 *Erebia wanga*. A: Male, upperside, Russia: Primorsky kray, 19 May 2002. B: *Ditto*, underside. C: Male genitalia, Russia: Primorsky kray, 21 May 1999.

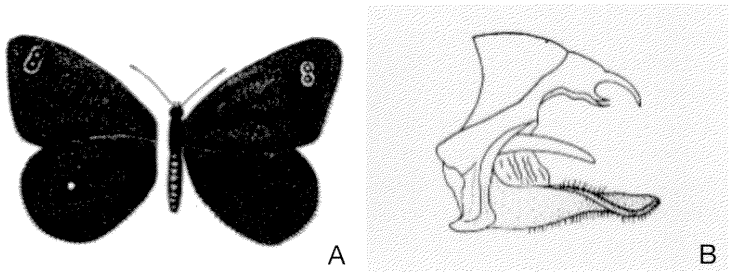


Fig. 4 *Erebia* "*tristior*" sensu Kurentzov, 1970 (after Kuretzov, 1970). A: Male. B: Male genitalia (left valva removed).

28, Pl. 4, figs 15–17.

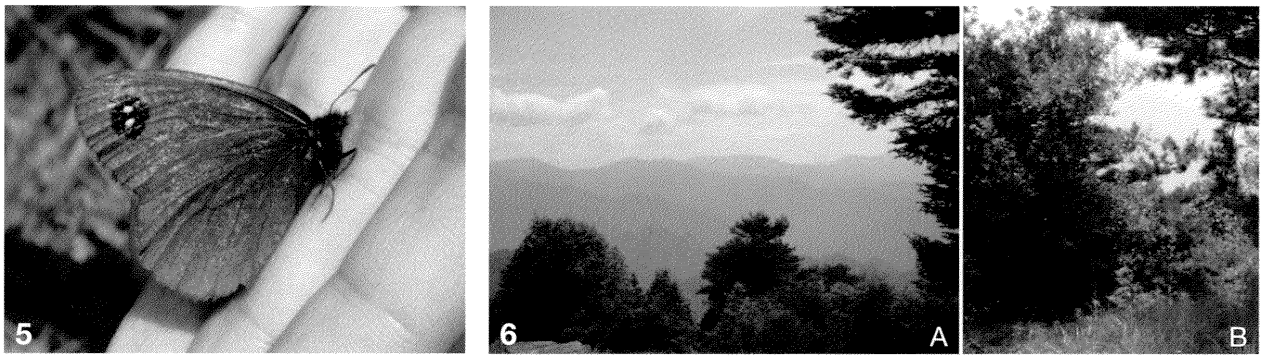
Type material is not examined, but following materials are studied: Russia: Amur region, 6♂, 2000 / Primorsky kray, 2♂, 1999; China: Heilongjiang prov., 2♂, 1995 / Jilin prov., 1♂1♀, 2008 / Liaoning prov., 4♂3♀, 2001 [All are in author's coll.].

Distribution: Amur region, North–eastern China, Northern Korean peninsula.

Kurentzov (1970) illustrated the wing marking and genitalia as *tristior* based on one male from 50 km east of Ussuriysk, Primorskiy kray, Far East of Russia (Fig 4). But the specimen figured was not true *tristior* but a variation of *wanga* because the white spot is clearly figured on the center of hindwing underside and the valva is wide and twisted at the tip. The misidentification of Kurentzov seems to cause some confusion. Kogure and Iwamoto (1992) illustrated two males and one female from Primorskiy kray as *tristior*, but the specimen illustrated the underside was apparently *wanga* because that has a white spot in the center of hindwing.

Acknowledgments

I would like to express my sincerest gratitude to Dr D. Stünig (ZFAK) for preparing photographs of type series. I am also indebted to Mr Chao Zhang, Mrs E. Tsuji, Mr M. Kogure and Mr A. Tera for their assistance in many aspects.



Figs 5–6. *Erebia tristior* in the field (photos courtesy of Mr Zhang). 5. Male just captured at Taibaishan, h=2,800 m. 6. Habitat. A: Hill top, Taibaishan, Qinling Mts, h=2,800 m, Shaanxi. B: Flora of the habitat.

References

Bremer, O., 1861. Neue Lepidopteren aus Ost–Sibiriens und dem Amur–Landes, gessamelt von Radde und Maack. *Bull. Scient. Acad. Sci. St. Petersb.* **3**: 461–496.

Bremer, O., 1864. Lepidopteren Ost–Sibiriens, insbesondere des Amur–Landes, gesammelt von den Herren G. Radde, R. Maack und P. Wullius. *Mém. Acad. Sci. St. Petersb.* **8**: 1–103, 8 pls.

Gorbunov, P. Y., 2001. The butterflies of Russia: classification, genitalia, key for identification. 320 pp. Thesis, Ekaterinburg.

Goltz, von D. H. F., 1937. Neue Erebienformen. *Dt. Ent. Z. Iris, Dresden. Bd.* **51**: 183–190.

Kogure, M. and Y. Iwamoto, 1992. Illustrated catalogue of the genus *Erebia* in color (1). *Yadoriga* (150): 2–33. (In Japanese)

Kurentzov, A. I., 1970. [The butterflies of the Far East USSR] 150 pp. Bun–ichi, Tokyo. (Japanese translation ed.).

Li, C. and B. Zhu, 1992. Atlas of Chinese butterflies. 79 pp., 152 pls. Shanghai Far East Pub., Shanghai.

Tuzov, V. K., 1993. The synonymic list of butterflies from the ex–USSR. 73 pp. Rosagroservice, Moscow.

Tuzov, V. K., 2006. A new *Erebia* Dalman, 1816 from China (Lepidoptera, Satyridae). *Helios* (7): 33–36+pl. 16.

Wang, H., 2005. The butterflies in the Nature Reserve, Gansu. 中国蝴蝶 [Chinese Butterflies, *Proc. butterfly branch of entomol. Soc. China*] **10**: 19–46.

Warren, B. C. S., 1936. Monograph of the genus *Erebia*. 407 pp., 104 pls. BMNH, London.

摘　要

中国に産する *Erebia* 属（タテハチョウ科）の一種について（中谷貴壽）

中国中部の秦嶺山脈に分布する *Erebia* 属の一種に関する学名を検討し，シノニミック・リストを整理し，lectotype と paralectotype を指定した．種 *Erebia tristior* は現在の知見では甘粛省と陝西省にまたがる秦嶺山脈の特産種と考えられ，標高1,000–3,000 m 付近で得られている．外観は *E. wanga* によく似るが，後翅裏面地色は無地の黒褐色で中室端に白点を欠くことで容易に区別される．

(Received January 10, 2012. Accepted March 23, 2012)